



2-1994m

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:)
William A. Cook, et al.) Before the Examiner
Serial No. 542,590) M. Shein
Filed October 17, 1983) Group Art Unit 335✓
EXERCISE RESPONSIVE CARDIAC) August 22, 1984
PACEMAKER)

SUPPLEMENTAL DISCLOSURE STATEMENT

Hon. Commissioner of Patents and Trademarks
Washington, D. C. 20231

Sir:

Applicants submit herewith the following publications of which they are aware which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

Publications:

Griffin, et al., "Non-Electrographic Indices of Optimal Pacemaker Rate," Vol. 23, p. 202, Proceedings, 34th Annual Conference on Engineering In Medicine and Biology; Houston, Texas, September 21-23, 1981, The Alliance for Engineering in Medicine and Biology, publishers.

Griffin, et al., "Central Body Temperature as a Guide to Optimal Heart Rate", Pace, Vol. 6, pp.498-501, March-April, 1983, Part II.

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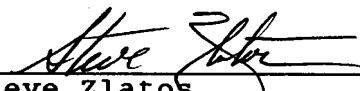
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According to the publisher, the first article referenced above is believed to have been published on or around September 19, 1981. This article is believed to be relevant based upon this statement that "[p]reliminary data from this study suggests that changes in central blood temperature could be used as an index of optimal heart rate during periods of muscular exercise." This article, however, fails to teach the mathematical relationship between blood temperature and heart rate, and how such a relationship could be used to advantage in an artificial pacemaker. While it is applicants' belief that for these reasons the reference is nonenabling under 35 U.S.C. §102, applicants wish to be totally candid concerning present efforts of others in the area of applicants' invention.

The article in Pace magazine describes treadmill tests conducted with thermistor probes placed in the atrium, ventricle and pulmonary artery of laboratory dogs. This study examined the effects of exercise on the temperature of blood returning to the heart, and indicated that the relationship of core blood temperature change to change in heart rate was best expressed as a power function (FIG. 2).

Respectfully submitted,

By 
Steve Zlatos
Reg. No. 30,123
Woodard, Weikart, Emhardt
& Naughton
One Indiana Square, Suite 2600
Indianapolis, Indiana 46204
(317) 634-3456

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